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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/198,751	11/24/98	HIGUCHI	M SEL-119
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COOK MCFARRON & MANZO  
200 WEST ADAMS STREET  
SUITE 2850  
CHICAGO IL 60606

MMC1/0725

EXAMINER

TON, M

ART UNIT

PAPER NUMBER

2871

DATE MAILED:

07/25/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/198,751

Applicant(s)

HIGUCHI ET AL.

Examiner

MINH-TOAN T TON

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 9-15, 36 and 37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 16-31, 34 and 35 is/are rejected.
- 7) ☒ Claim(s) 7, 32 and 33 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some \* c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☒ received.
2. ☐ received in Application No. (Series Code / Serial Number) \_\_\_\_\_.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_.

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***Election/Restriction***

1. An election without traverse of Group I, claims 1-8, 16-27, 28-35 is acknowledged.

***Claim Rejections - 35 U.S.C. § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1, 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Shimada (PN 5877832).

Shimada discloses and shows in Figures 2A, 4A an active matrix liquid crystal display device comprising : a plurality of pixel electrodes 11 disposed on a substrate; each of the pixel electrodes is connected to a switching element TFT through a contact portion 10; the contact portion 10 is filled with an insulating material 18, wherein the insulating material comprises an organic thin film such as polyamide (col. 8, lines 12-16).

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*Claim Rejections - 35 U.S.C. § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada as applied to claims 1, 6 above.

The use of a liquid crystal display in an electronic equipment is notoriously known and common in the art for advantages including light weight, low power consumption.

6. Claims 16, 22-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada as applied to claims 1, 6 above, and further in view of Yamazaki (PN 5453858).

A conventional peripheral driving circuit is generally composed of a single silicon MOS integrated circuit (IC). Yamazaki discloses that such conventional peripheral driving circuit suffers several problems such as a superfine display cannot be realized, a display device as a whole occupies a large area and volume, and the connections are of low reliability (see col. 1, line 39 to col. 2, line 6). Yamazaki solves such problems through the use of TFTs rather than semiconductor chips for the driver circuit (see col. 2, lines 7-12). Yamazaki disclose that by fabricating a part of the peripheral circuits as TFTs, the number of external ICs is reduced, and

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therefore the production cost is reduced. Therefore, it would have been obvious to one of ordinary skill in the art to employ TFTs in the peripheral driving circuit for avoiding several problems such as a superfine display cannot be realized, a display device as a whole occupies a large area and volume, and the connections are of low reliability, and for achieving several advantages such as the production cost is reduced.

Per claims 23-27, the use of electronic equipments such as a projector, a television, a camera is notoriously known and common in the art for advantages including light weight, low power consumption.

7. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada in view Yamazaki as applied to claims 16-17, 22-27 above, and further in view of Kunii et al (PN 5412493).

Kunii et al disclose an active matrix LCD device having LDD structure thin film transistors connected in series for achieving advantages such as suppressing leakage current. Therefore, it would have been obvious to one of ordinary skill in the art to employ an LDD structure thin film transistors connected in series for achieving advantages such as suppressing leakage current.

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8. Claims 2-5, 28-31, 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada (PN 5877832).

Shimada discloses and shows in Figure 9A an active matrix liquid crystal display device comprising : a plurality of pixels having a first electrode 11a and a second metal electrode 40 disposed on a substrate; each of the pixels is connected to a switching element TFT through a contact portion; an insulating layer 100 disposed between the first electrode and the second metal electrode, wherein the second metal electrode is covering the insulating layer; the contact portion is filled with an insulating material, wherein the insulating material comprises an organic thin film such as acrylic resin.

The limitation not disclosed by Shimada disclose is the first electrode being a first metal layer. It is known in the art that a reflective LCD device yields several advantages over a transmissive device including no back light, low power-consumption, wherein the conventional reflective LCD commonly employs a reflective (metal such as Al, Cr, Ti, Mo, Ta) electrode. Therefore, it would have been obvious to one of ordinary skill in the art to employ a reflective electrode obtaining a reflective LCD device for achieving several advantages including no back light, low-power consumption.

Per claims 34-35, the use of electronic equipments such as a projector, a television, a camera is notoriously known and common in the art for advantages including light weight, low power consumption.

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9. Claims 16-17, 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada in view of Yamazaki (PN 5453858).

With respect to Shimada, refer to Figure 9A as explained above.

With respect to Yamazaki, refer to explanations recited above.

***Allowable Subject Matter***

10. Claims 7, 32-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

***Contact Information***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. TON whose telephone number is (703) 305-3489. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

T. TON  
July 21, 2000

  
**Patent Examiner**  
Technology Center 2800